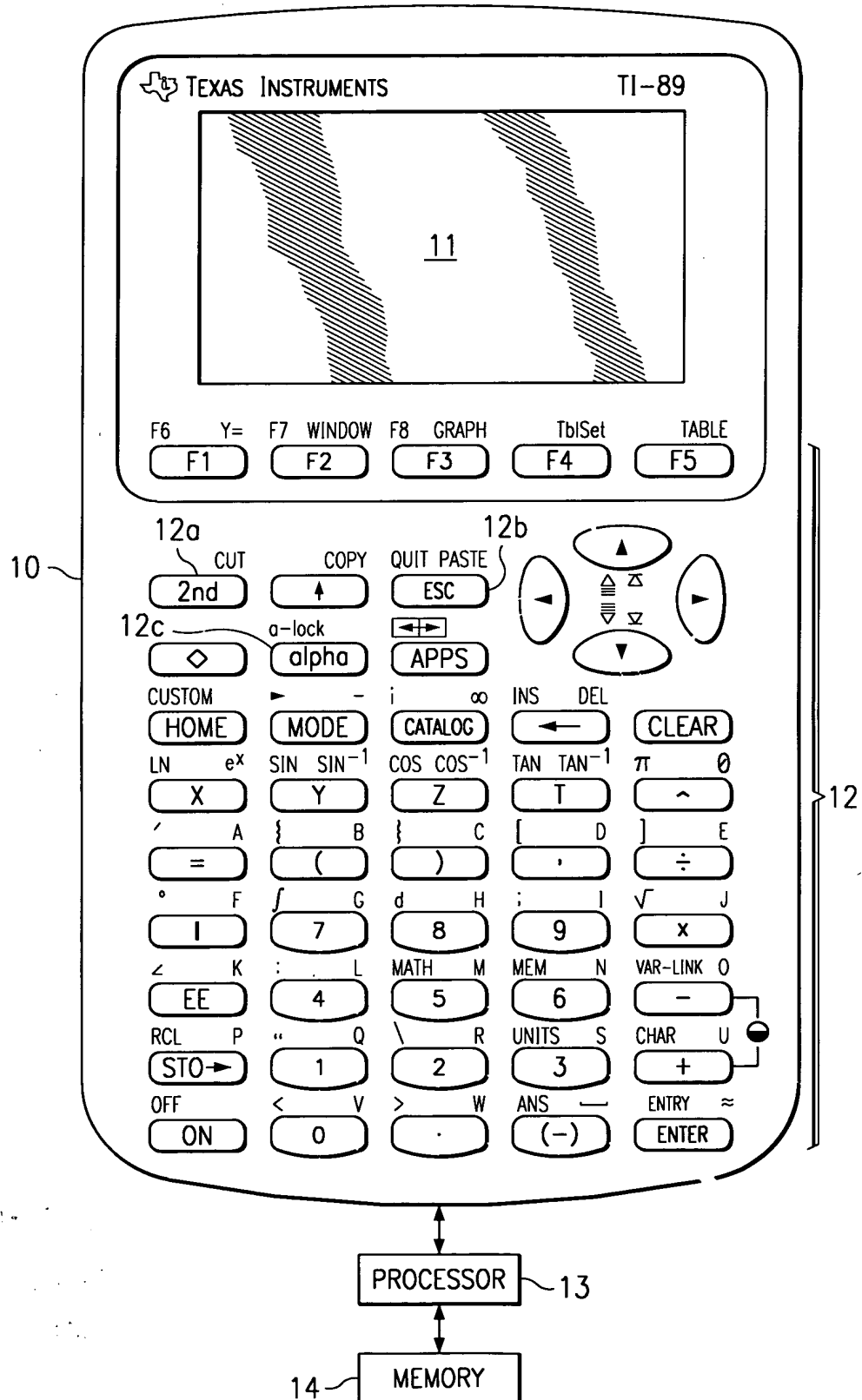




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FIG. 1
(PRIOR ART)





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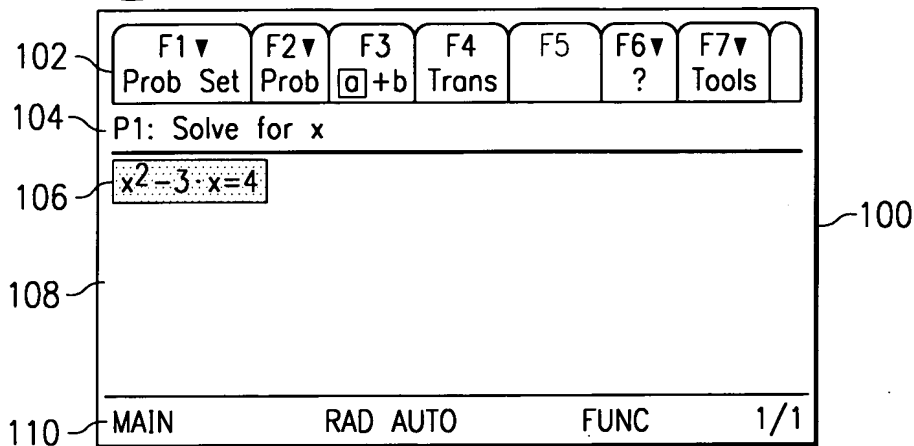


FIG. 2a

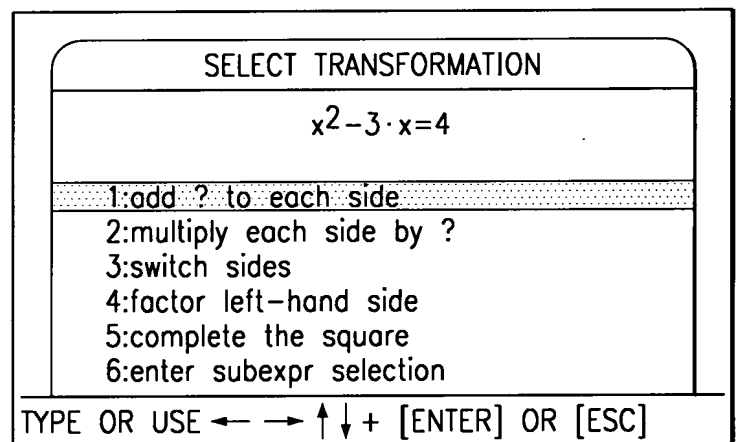


FIG. 2b

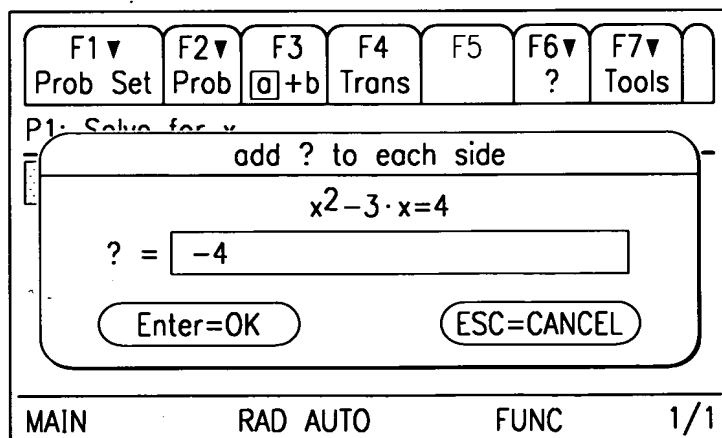


FIG. 2c



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F1▼ Prob Set	F2▼ Prob	F3 □+b	F4 Trans	F5	F6▼ ?	F7▼ Tools	
P1: Solve for x							
$x^2 - 3 \cdot x = 4$							
► add -4 to each side							
Press <ENTER>							
MAIN		RAD AUTO		FUNC		PAUSE	

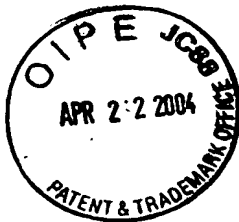
FIG. 2d

F1▼ Prob Set	F2▼ Prob	F3 □+b	F4 Trans	F5	F6▼ ?	F7▼ Tools	
P1: Solve for x							
$x^2 - 3 \cdot x = 4$							
► add -4 to each side							
$x^2 - 3 \cdot x + -4 = 4 + -4$							
MAIN		RAD AUTO		FUNC		1/1	

FIG. 2e

F1▼ Prob Set	F2▼ Prob	F3 □+b	F4 Trans	F5	F6▼ ?	F7▼ Tools	
P1: Solve for x							
$x^2 - 3 \cdot x = 4$							
► add -4 to each side							
$x^2 - 3 \cdot x + -4 = 4 + -4$							
► simplify							
Press <ENTER>							
MAIN		RAD AUTO		FUNC		PAUSE	

FIG. 2f



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F1▼ Prob Set	F2▼ Prob	F3 [a]+b	F4 Trans	F5	F6▼ ?	F7▼ Tools
P1: Solve for x						
$x^2 - 3 \cdot x = 4$						
► add -4 to each side						
$x^2 - 3 \cdot x + -4 = 4 + -4$						
► simplify						
$x^2 - 3 \cdot x - 4 = 0$						
MAIN		RAD AUTO		FUNC		1/1

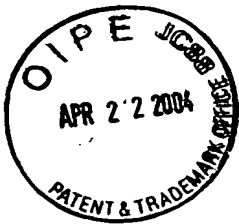
FIG. 2g

SELECT TRANSFORMATION						
$x^2 - 3 \cdot x - 4 = 0$						
1: add ? to each side						
2: multiply each side by ?						
3: switch sides						
4: factor left-hand side						
5: quadratic formula						
6: enter subexpr selection						
MAIN		RAD AUTO		FUNC		1/1

FIG. 2h

F1▼ Prob Set	F2▼ Prob	F3 [a]+b	F4 Trans	F5	F6▼ ?	F7▼ Tools
P1: Solve for x						
$x^2 - 3 \cdot x + -4 = 4 + -4$						
► simplify						
$x^2 - 3 \cdot x - 4 = 0$						
► factor left-hand side						
$(x - 4) \cdot (x + 1) = 0$						
MAIN		RAD AUTO		FUNC		1/1

FIG. 2i



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SELECT TRANSFORMATION			
$(x-4) \cdot (x+1) = 0$			
1: add ? to each side			
2: multiply each side by ?			
3: switch sides			
4: $A \cdot B = 0 \rightarrow A = 0 \text{ or } B = 0$			
5: distribute multiplication			
6: $(A \pm B) \cdot C \rightarrow A \cdot C \pm B \cdot C$			
7: $A \cdot (B \pm C) \rightarrow A \cdot B \pm A \cdot C$			
MAIN	RAD AUTO	FUNC	1/1

FIG. 2j

F1▼	F2▼	F3	F4	F5	F6▼	F7▼	
Prob Set	Prob	$\boxed{a} + b$	Trans		?	Tools	
P1: Solve for x							
$x^2 - 3 \cdot x - 4 = 0$							
► factor left-hand side							
$(x-4) \cdot (x+1) = 0$							
► $A \cdot B = 0 \rightarrow A = 0 \text{ or } B = 0$							
$x-4=0 \text{ or } x+1=0$							
MAIN				RAD AUTO		FUNC 1/1	

FIG. 2k

SELECT TRANSFORMATION	
$x-4=0 \text{ or } x+1=0$	
1: solve linear equation	
2: enter subexpr selection	
TYPE OR USE ← → ↑ ↓ + [ENTER] OR [ESC]	

FIG. 2l



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F1▼ Prob Set	F2▼ Prob	F3 [a] +b	F4 Trans	F5	F6▼ ?	F7▼ Tools
P1: Solve for x						
$(x-4) \cdot (x+1) = 0$						
► $A \cdot B = 0 \rightarrow A = 0$ or $B = 0$						
$x - 4 = 0$ or $x + 1 = 0$						
► solve linear equation						
$x = 4$ or $x = -1$						
MAIN		RAD AUTO		FUNC		1/1

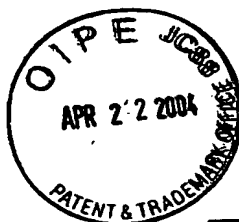
FIG. 2m

F1▼ Prob Set	F2▼ Prob	F3 [a] +b	F4 Trans	F5	F6▼ ?	F7▼ Tools
P1: Solve for x						
$x^2 - 3 \cdot x - 4 = 0$						
► quadratic formula						
$x = \frac{-(-3) \pm \sqrt{(-3)^2 - 4 \cdot 1 \cdot -4}}{2 \cdot 1} \text{ or } \blacktriangleright$						
MAIN		RAD AUTO		FUNC		1/1

FIG. 2n

F1▼ Prob Set	F2▼ Prob	F3 [a] +b	F4 Trans	F5	F6▼ ?	F7▼ Tools
P1: Solve for x						
► quadratic formula						
$x = \frac{-(-3) \pm \sqrt{(-3)^2 - 4 \cdot 1 \cdot -4}}{2 \cdot 1} \text{ or } \blacktriangleright$						
► simplify						
$x = 4$ or $x = -1$						
MAIN		RAD AUTO		FUNC		1/1

FIG. 2o



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F1▼ Prob Set	F2▼ Prob	F3 a+b	F4 Trans	F5	F6▼ ?	F7▼ Tools
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P3: Solve for x

$x^2 - 3 \cdot x = 4$
 ► add -4 to each side
 $x^2 - 3 \cdot x + -4 = 4 + -4$
 ► simplify

$x^2 - 3 \cdot x - 4 = 0$

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116 Use ←, →, ↓, ↑, Shift ←, Shift →, ESC, F3, F4, F7

FIG. 3a

FIG. 3b

SELECT TRANSFORMATION

$x^2 - 3 \cdot x - 4$

1:factor

2:A-B → A+⁻B

3:exit subexpr selection

4:rewrite as ?

TYPE OR USE ← → ↑ ↓ + [ENTER] OR [ESC]

F1▼ Prob Set	F2▼ Prob	F3 a+b	F4 Trans	F5	F6▼ ?	F7▼ Tools
-----------------	-------------	------------------	-------------	----	----------	--------------

P3: Solve for x

$x^2 - 3 \cdot x = 4$
 ► add -4 to each side
 $x^2 - 3 \cdot x + -4 = 4 + -4$
 ► simplify

x^2 $-3 \cdot x$ $-4 = 0$

MAIN RAD AUTO FUNC 3/3

FIG. 3c

FIG. 3d

SELECT TRANSFORMATION

$-3 \cdot x$

1:arithmetic

2:(-A)·B → -(A·B)

3:arith, -, 0 & 1 ident

4:A·B → B·A

5:exit subexpr selection

6:rewrite as ?

TYPE OR USE ← → ↑ ↓ + [ENTER] OR [ESC]